THE E-COMMERCE WAY P12

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COMPUTERWORLD

For Singapore's Information Systems Professionals

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Service levels must be maintained, say DEC users

By **Tao Ai Lei and Solomon S Emanuel**

Digital Equipment users in Singapore are happy with the recently proposed US$9.6 billion (S$16 billion) Compaq-Digital merger, as long as service levels are maintained. For some, the only concern was the continued support of existing systems, like Digital's OpenVMS. However, it is these systems which analysts say, are unlikely to have continued development.

"Notwithstanding the new changes, we still want support for existing systems. Compaq-Digital may come up with new products — be it Alpha, Beta, whatever ... it may even be a completely different architecture, but customers want some form of continuity," said Lim Kim Foong, senior MIS manager, Singapore CableVision which has a number of Alpha servers running OpenVMS.

"My only major concern is support. So far, Digital has been providing pretty good support," said Richard Tay, MIS officer, at Gatx Terminals, which uses Windows NT on Alpha and has a few Digital PCs.

Chan: Alpha's destiny becomes questionable.

For others, the merger bodes well, with promises of better services and technology, leveraging on the resources of the combined companies.

"To us it doesn't matter so much because the concept of a merger is being able to share more resources, to tap on one another's strength, and make a better company," said Vincent Ho, EDP administrator, Harpers Shipping.

Users of heterogeneous platforms expect common support for both PC and enterprise hardware systems.

"It will probably widen the scope of support especially when we do upgrades, as we have Digital and Compaq machines. Our Compaq machines are currently not supported by Digital," said C E Tan, systems manager, Pacific International Lines. Her company has a mix of VAX machines and Alpha servers that run OpenVMS, VMS, DEC-Unix and Windows NT.

Uncertain future

Uncertainty of the future ruled for one user.

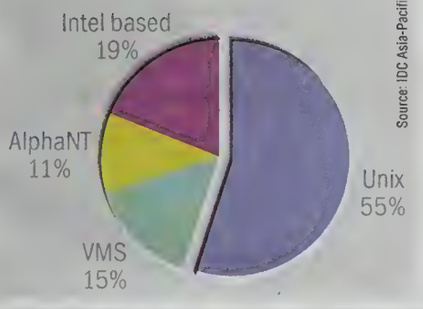
"We are now dealing with a bigger company. We don't know whether they will integrate fully at the high-end or at the operating level, or whether there will be a common support point," said N S Ramadoss, IT manager, DNV Petroleum Services.

Analysts expect duplicate product lines, especially the PC business, to be streamlined. Digital's high-end systems are expected to remain intact, being the key reason Compaq is said to have bought Digital.

"On the PC side, Compaq definitely has a much better brand name than Digital. I expect Compaq would first rationalise those operations and just have its own brand of

SERVICE, Continued on page 8

Digital's revenue distribution of servers by operating system



Source: IDC Asia-Pacific

DEC to increase NT commitment

By **Solomon S Emanuel**

Digital Equipment and Microsoft recently announced enhancements to their Alliance for Enterprise Computing (AEC), a collaboration designed to accelerate the implementation of Windows NT and Microsoft's BackOffice family on both the Intel and Alpha platforms.

The alliance, which started two years ago, aims to bring highly scaleable enterprise products, improved integration of heterogeneous systems, and lower total cost of ownership (TCO) to customers.

Robert B Palmer, chairman of Digital, said that the extended AEC is committed to helping his company's customers deploy Windows NT across the enterprise from the desktop to the data centre.

Leveraging on Digital's experience in developing highly scaleable enterprise servers, both companies will collaborate on a new generation of high-performance servers for the next implementation of Windows NT Server Enterprise Edition. The massively symmetric multiprocessing (SMP) servers supporting Very Large Memory (VLM) will use advanced Alpha chip and system technologies while maintaining applications compatibility with all Windows NT-based systems, Digital said.

"We will provide value-added enterprise-class software to enhance and extend the scaleability, availability and manageability of Windows NT. That will enable customers to deploy mission critical applications on NT sooner and with lower risk than from any other vendor," Palmer said.

The companies will cooperate on a single programming model and a single API for 64-bit Windows NT running on Intel- and Alpha-based systems. This will provide source code compatibility between both systems for Windows NT application development.

Initial systems will use 32, 64 or more Alpha processors and are expected to debut in early 1999. Windows NT 5.0 will provide a tightly integrated and supported emulation and translation environment on Alpha, based on Digital's FX!32 technology that allows seamless execution of *x*86 binaries.

According to Palmer, Digital and Microsoft will continue to develop and integrate migration tools for OpenVMS and Unix.

"Microsoft will continue to ship those NT products with the same features on both the Alpha and the *x*86 architectures. The products include NT Workstation, NT Server, all major BackOffice products and the complete set of application development tools," he added.

Merging eclipse

While details of the extended AEC underscored Digital's commitment to Windows NT for the enterprise and Alpha's role in it, the announcement was eclipsed by Compaq Computer's intended purchase of Digital announced the day before. To date, both Compaq and Digital officials have made assurances that the plans set forth in the extended AEC will take effect.

In a press release issued by Compaq, it's president and CEO, Eckhard Pfeiffer, said that Compaq puts "tremendous value" on the customer relationships Digital has cultivated.

"We are committed to supporting these key customer relationships by investing in Digital's strategic assets, particularly its worldwide service organisation, as well as its 64-bit leadership with Alpha microprocessors, OpenVMS, Digital Unix and Windows NT enterprise systems, open storage and software products," he said. CW

going on

High on video-conferencing
Wearnes sees a golden opportunity in the technology. PAGE 6

Upbeat on e-commerce
Local retailers give the thumbs up for online commerce. PAGE 10

coming up

Suite to come
What's available in the next Microsoft Office release. PAGE 9

Pushing MOM to enterprises

Find out what MOM is, and how she or it is helping firms scale up their online operations. PAGE 15.

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Digital, HIS set to upgrade hotel industry

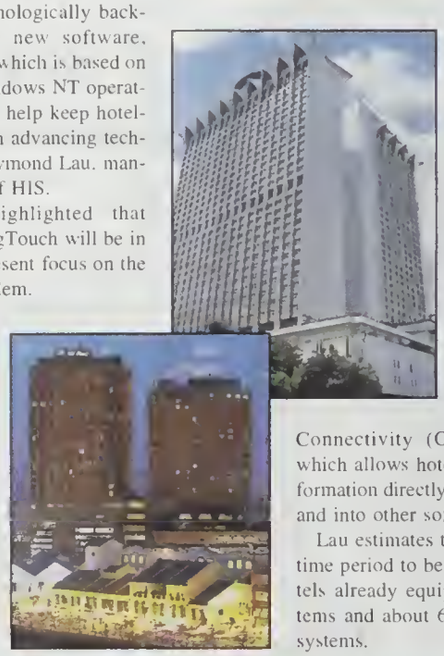
By Eileen Yu

Digital Equipment Asia-Pacific and Hotel Information Systems Asia-Pacific (HIS) have joined hands in launching a new information technology framework for the hotel industry here.

The hotel industry is commonly perceived as "technologically backward" and the new software, LodgingTouch, which is based on Microsoft's Windows NT operating system, will help keep hoteliers in pace with advancing technology, said Raymond Lau, managing director of HIS.

Lau also highlighted that the new LodgingTouch will be in line with the present focus on the Year 2000 problem.

"Year 2000 is around the corner, but there is lack of awareness of this in the hotel industry," he said. "This is an important and relevant issue to address as hotel bookings are sometimes made one or two years in advance."



One of the main features of LodgingTouch is the accessibility of important guest information, and up-to-date statistical information like room occupancy figures, either in numbers or charts.

The new software also allows hotel chains to create a Centralised Information Sys-tem (CIS) where guests can make bookings for rooms in offshore branches from the local branch. Guest data can also be shared across the entire chain around the region or the world.

LodgingTouch is equipped with Open Database Connectivity (ODBC) technology which allows hoteliers to pull out information directly fromLodgingTouch and into other software programs.

Lau estimates the migration downtime period to be "minimum" for hotels already equipped with HIS systems and about 6 hours for non-HIS systems.

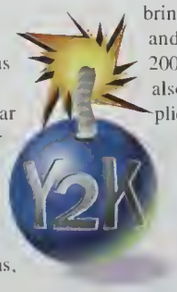
Banyan whips up Y2K programme

Focus is on networking and messaging

By Eileen Yu

To get its customers ready for the next millennium, Banyan Systems is offering a range of Year 2000 compliant products and services for the entire enterprise.

Current Year 2000 compliant tools focus only on mainframes and miss out on the extended enterprise, said Banyan Systems Asia Pacific Senior Systems Consultant Tham Joon Nam.



"Enterprises without total Year 2000 compliance could face major problems come the turn of the millennium," he said.

Banyan's Year 2000 Readiness Program, which focuses on the network operating and e-mail systems, comes in five phases.

— Network FastStart Service. Banyan will provide an on-site educational overview to highlight the Year 2000 problem and a "mini-assessment" of the needs of its client's network operating and electronic mail systems.

— Network Assessment. This service provides an inventory and analysis of these systems, and assesses the extent of Year 2000 renovation required.

— Network Planning Service. Based on the assessment, Bayan will set up an appropriate in-house programme to manage the year 2000 process. This includes migration planning, resource allocation, tools identification and acquisition, implementation plans, and schedules. This service also includes plans for technical systems, project plans, tracking processes and operational checklists for staging a renovation project.

— Network Renovation Service. This brings the network operating system and messaging platforms to Year 2000 compliant versions. This service also helps migrate user data and applications in the client environment.

— Network Validation Service. A screen-test for Year 2000 readiness of the system and related applications once Network Renovation has been completed. It verifies that dates have been changed and are working properly.

With the exception of the Network Planning Service which is tied to the Network Assessment Service, clients may opt to purchase each service in the programme separately.

For users of non-Banyan network applications, Banyan will co-ordinate with the relevant vendors to decide the appropriate renovation plans.

Depending on the size and complexity of the network enterprise, Banyan estimates that an entire Year 2000 operation could take from nine to 15 months, with Banyan's Year 2000 Readiness Program focusing on the networking part of this operation.

SINGAPORE SCENE

SingTel to get more connected

Singapore Telecom will spend more than S$15 million to enhance its interconnect arrangements between telephone lines and the various mobile and paging operators' networks in Singapore. Additional switches are needed to ensure adequate capacity for traffic between these networks. SingTel expects to have 10 interconnect switches by 1999.

Glenayre opens HQ, introduces technology

Personal communications specialist, Glenayre Technologies officially opened its new Asia-South headqurters in Singapore. The S$15 million headquarters will be a testbed for new communications technologies and applications, provide training and enginering services, with research and development facilities, for more than 15 Asian markets, including countries like Australia, India and China. Glenayre also introduced its two-way paging technology as part of its Asian expansion plans. The new paging technology allows the subscriber to send, receive and reply e-mail messages through the pager, said Greg Reyes, president of Glenayre's Wireless Access Group. The subscriber can then respond to messages by selecting a list of preset messages or by keying a new message through alphabatical scrolling, Reyes said.

CSM, Lucent in $1 billion venture

Chartered Semiconductor Manufacturing (CSM) and Lucent Technologies Microelectronics announced a new US$1 billion (S$1.8 billion) joint venture to manufacture integrated circuits in Singapore. The new offspring, called Silicon Manufacturing Partners, would employ 800 workers and at full capacity would produce 26,000 eight-inch wafers per month. Lucent's global customer base will use these wafers in products like computing equipment, cellular phones and other electronic devices. CSM will channel its portion to support its customers around the world. The joint venture company will be located on CSM's semiconductor fabrication campus at the Woodlands Industrial Park. US-based Lucent had last month introduced a new digital signal processor (DSP) for digital cordless telephones, answering machines and Internet appliances which it claimed was three times faster than competing DSPs in the same price range. CSM is a subsidiary of the Singapore Technologies Group.

Experts answer for free

Singapore's Science Centre has launched ScienceNet, a web-based forum which offers students and anyone logging onto their web site, to obtain authoritative answers to their scientific queries. The categories include: computer science, earth science, engineering, life science, physical science, and space & astronomy. Questions will be answered by more than 70 academic staff and research scientists from the National University of Singapore and the Nanyang Technological University. The ScienceNet can be located at http://www.sci-ctr.edu.sg/ScienceNet.

Adobe gets cosy with customers

Adobe has launched Adobe Studio, a new customer relationship programme available to registered users of Adobe products. Amongst other things, programme members will gain discounts on Adobe products, access to technical documents and reference materials, and invitations to studio events. It hopes that the benefits the programme offers will encourage users to register their software and to stamp out piracy.

Secure CashCard payments

Kent Ridge Digital Labs (KRDL) has developed C-ONE, a smart card based Internet payment system. C-ONE, developed using Java, allows users of NETS' CashCard system to pay for goods and services securely over the Internet. KRDL is the new merger of the Institute of Systems Science and the Information Technology Institute.

Microsoft targets SMEs

Microsoft Singapore is working with its business partners to bundle products and services that meet the needs of small and medium-sized enterprises (SMEs) here.

Key to the offering is Microsoft's BackOffice Small Business Server – a suite of server applications designed to support SMEs with up to 25 PCs. The suite simplifies network administration and management and allows an organisation to create intranets and share information and network resources.

To support its effort, Microsoft has trained more than 100 systems integrators on the software. It has also roped in independent software vendors including Seagate Software, Solomon Accounting, AccPac, NIS (electronic data interchange), and Lyrehc (materials resource planning) to provide applications to complement BackOffice Small Business Server.

On the hardware side, PC vendors like Acer, IBM and Digital, are bundling this suite with their computers.

Microsoft BackOffice Small Business Server is available at the estimated reseller price of US$1,499 (S$2,475) for five users and US$2,459 (S$4,060) for 25 users. Additional packs of five Small Business Server Client Licenses are available for US$309 (S$510).

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Unicenter TNG is the most open, interoperable and scalable management solution available. It has been publicly endorsed by virtually every major hardware and software company, including Microsoft, Sun, SAP, Intel, HP, DIGITAL, Tandem, NCR, SGI, and Data General. Peter Kastner from the Aberdeen Group recently summed it up when he said, "Aberdeen positions the Framework as the enterprise management entry-level user choice and *de facto* ISV platform choice."

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Wearnes gets on videoconferencing high

By Gerald Wee

Even though videoconferencing has not taken off in Singapore, Wearnes Technology remains optimistic about the market and expects to sell one million units of its latest digital video camera worldwide.

Wearnes launched this week at Challenger Superstore the Xirlink VideoPhone XVP-500, a digital video camera that connects to the PC via a Universal Serial Bus (USB). Targetted for general home and office use, the camera ships with software that allows the PC user to connect to another PC user via a direct phone line over the Internet, or over the LAN.

Wong: Singapore ONE will drive videoconferencing

The XCP-500 is priced at S$288.

According to Wearnes, the videoconferencing market is approaching a boom.

"We estimate the market for PC videoconferencing equipment to be 20 million pieces this year and that will grow to 200 million by the year 2000," said Wong Chun Win, chairman of Wearnes Technology. "It will be a standard component of PCs by 1999."

Wearnes is currently talking with top PC manufacturers like Compaq, Dell, Gateway 2000, and Hewlett-Packard, on details on how they can original equipment manufacture (OEM) the Xirlink VideoPhone. Xirlink is a subsidiary of Wearnes.

In Singapore, Wong expects Singapore ONE, the nationwide highspeed network, to boost videoconferencing's prospects.

"To get high quality videoconferencing, bandwidth must increase," he said. "With Asymmetric Digital Subscriber Line (ADSL) technology made available here, users can achieve near television quality."

Wearnes expects to launch ADSL videophones in Singapore in April.

"Video cameras will be a standard component of PCs by 1999."
– Wong Chun Win
Chairman, Wearnes Technology

Web developer sets up Asian base

Agency.Com which develops electronic-commerce Web sites will make Singapore the base for its Asian operations within the next two months.

Chan W Suh, chairman and CEO of Agency.Com, said that the company's Asian operations will be a logical extension to its business that started in the United States and operates in Europe as well.

"We generally deal with multinationals and large companies, so my first interest is in making sure that they are taken care of," he said. "We provide a creative service, so it's hard for us to support them from the United States or even from London. The time difference itself just makes it impossible."

Chan added that since the creative work of designing a Web site involves a lot of interaction and discussion with clients, being close to the client is an essential ingredient for providing good service.

"So I want to make sure that we can service them correctly from here. Over the last six to seven months, we've been looking at different places in Asia and Singapore was chosen."

Meanwhile he appears undaunted by the current economic difficulties being experienced in the region.

"I think it's temporary. I'm not looking at this as an opportunistic thing because we've been doing our homework for a very long time. We're not going to come in here to look for bargains. We're going to stay here for a long time," he said.

AGENCY.COM

— Solomon S Emanuel

SBA touts digital broadcasting

By Eileen Yu

The Singapore Broadcasting Authority (SBA) has introduced Digital Audio Broadcasting (DAB), a technology which can broadcast not just audio or radio programmes, but text, images and even moving pictures.

Although not commercially available yet, DAB's potential is evident.

Cars equipped with DAB receivers would be able to see road maps, on top of radio announcements, showing congestion areas, accident spots and alternative routes, a move which would compliment Singapore's present focus on networks like the Intelligent Vehicle Highway System, said Lee Hock Chuan, chief executive officer of SBA.

"A key feature of DAB is its robust reception in moving vehicles in which commuters will be able to get high quality reception in buses, cars and other vehicles," he said.

People in countries like Germany and the United Kingdom are already using DAB to transmit traffic information, stock market information, weather reports and even live news, Mr Lee said.

According to Radio Broadcasting Corporation (RCS) Engineering vice-president Asaad Sameer Bagharib, DAB can also tailor to the needs of radio listeners with specific needs at a low cost because it is able to transmit several programs on a single frequency.

RCS is presently experimenting in DAB technology with two of their stations, Class95FM and Symphony92.4FM. Listeners equipped with DAB receivers can enjoy CD-quality and static-free audio service when tuned to these stations.

While RCS only provides DAB audio service now, it hopes to include DAB data services to its listeners in a month or two, said Bagharib.

"Our target is to provide two sources of information. One of which is to provide information that accompanies our music, like album titles, song titles and lyrics. The other is to update our listeners on traffic reports," he said.

A DAB system, complete with display set, amplifiers, and decoder kit, would cost about S$5,000 if released into the retail market here, according to Deutsche Telekom sales manager Robin Ang. A DAB receiver, without the display screen, would cost about S$2,000.

Alternatively, a DAB receiver card can also be installed into a PC for S$1,000, Ang said.

Deutsche Telekom is currently negotiating with German DAB manufacturer Bosch on bringing DAB receivers into the retail market here. Although details were not finalised, Ang said that DABs may be available here as early as June this year.

Deutsche Telekom is currently one of the largest DAB network providers in Germany and is engaged by SBA to conduct a DAB feasibility study in Singapore.

TAKING STOCK

Informix earnings down

Informix announced preliminary, unaudited fourth-quarter earnings of US$9.2 million (S$15 million), or five cents per diluted share, down from US$34.1 million (S$56 million), or 22 cents per share, a year ago. While quarterly revenues also were down to US$181.2 million (S$298 million) from the previous year's US$270.8 million (S$445 million), the company was pleased to have realised an operational profit of US$17.8 million (S$29 million) for the quarter ended 31 December 1997. "We have shown solid progress during the fourth quarter," said Bob Finocchio, chairman and CEO of Informix. The database maker continues to exert tight control on company expenses and to improve cash management, he added. Yearly revenues, totalling US$662.3 million (S$1.09 billion) after restatement, were down from US$940 million (S$1.55 billion) in fiscal 1996. In May of 1997, Informix announced the restatement of fiscal 1996 results due to company accounting errors which impacted the first two fiscal quarters of 1997.

Lexmark reports record earnings

Lexmark International announced record revenues for the fourth quarter of 1997 and the full year. For the last quarter, revenues were US$736 million (S$1.21 billion), 7 per cent over the US$687 million (S$1.13 billion) a year ago. For the full year 1997, revenues were US$2.5 billion (S$4.12 billion) a 5 per cent increase over 1996's US$2.4 billion (S$3.96 billion).

Baan nets up to 110 per cent

Baan reported 1997 net income of US$77.2 million (S$127 million), or 37 cents per diluted share, an increase of 110 per cent over the previous year. The company also reported a 65 per cent boost in revenues to US$684 million (S$1.12 billion) for fiscal 1997, ended December 31, compared with net revenues of US$415.6 million (S$685 million) in 1996. Baan said currency fluctuations had adversely affected 1997 revenues, which would have been 8 per cent higher otherwise. Fourth-quarter net income at the Dutch company totalled US$29.1 million (S$48 million), or 14 cents per diluted share. Total net revenues for the fourth quarter were US$220 million (S$363 million), a 65 per cent climb in net revenues over the fourth quarter of 1996. Baan said that the company experienced strong growth in all regions in 1997.

EMC records record

EMC has reported record results for its 1997 fourth qurater and fiscal year. Fourth quarter revenue was US$873.4 million (S$1.44 billion), 33 per cent higher than 1996. Net income over that period was US$166.2 million (S$274 million), up 34 per cent compared with 1996. For 1997, EMC's revenue was US$2.94 billion (S$4.85 billion), 29 per cent over 1996, while net income was US$539 million (S$889 million), 39 per cent more than what it achieved in 1996.

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AMD's new chips may face roadblocks

By Brian McWilliams

PC buyers who are eagerly awaiting new chips from Advanced Micro Devices (AMD) won't be pleased by a new report from chip analyst Ashok Kumar at Loewenbaum & Co.

Kumar says that AMD's well-publicised manufacturing-yield problems may prevent it from effectively competing with Intel over the next year.

AMD is currently switching over to a smaller die size for its 266MHz K6 processors, moving from 0.35 to 0.25, or quarter-micron. The change is necessary in order for AMD to get higher clock speeds, according to Kumar. But he says engineering problems have caused AMD's plant in Austin, Texas, to struggle along with yields of one per cent — that is, 99 of every 100 wafers get thrown away. Yield is much better at AMD's Santa Clara, California-based plant, at about 45 per cent. The result of these yields is not enough K6 chips to meet demand from AMD customers such as Compaq, IBM, Digital, and many second- and third-tier PC vendors.

Besides these problems, Kumar says AMD seems to be struggling with its new K6-3D processor, which the company has positioned as its high-end flagship product for 1998. AMD was promising clock speeds between 300 and 350MHz, just high enough to keep it competitive with Intel's forthcoming Mendocino processor, a 300-MHz Pentium II with 128KB of L2 cache. Mendocino, according to Kumar, will be Intel's entry-level processor by next October.

But the K6-3D, which is being tested now, has also run into performance problems that may keep it from competing with Mendocino. Kumar says AMD will have to significantly improve its execution. CW

SERVICE, Continued from page 1

PCs and Intel-based PC servers," said Saleem Bikanerwala, director of research, systems and servers, workstations at IDC Asia-Pacific.

"I think Compaq would want to support their Digital customers and encourage them to grow within their confined environment. Eventually when the Intel Merced chip competes head-on with Alpha, Alpha's destiny becomes more questionable," said Chan Jee-Meng, programme director at GartnerGroup.

Some areas of business, such as VMS, are not expected to survive long after the acquisition.

"Digital for quite some time has been actively promoting Windows NT within its VMS installed base. We should see marginal developments in the VMS area and the migration over to NT to just become faster," said Bikanerwala.

Massive exodus

Analysts expect the process of integrating the two companies to include massive layoffs.

"Digital has always suffered from very high overheads and has not been able to compete efficiently in the PC space due to its pricing," said Bikanerwala. "There should be massive layoffs starting mainly from the PC product team."

For Compaq, the most imediate task at hand is the merging of two disparate company cultures.

"Digital has always been a people company and not very process-oriented. Compaq on the other hand is a lean organisation and being in the PC industry is quick to make tactical changes in its strategy. The second challenge for Compaq would be to retain Digital's technical and R&D staff," said Bikanerwala.

Compaq's acquisition of Digital makes Compaq a one-stop provider for every computing need, from homes to giant corporations, and puts it, together with IBM and Hewlett-Packard (HP), well ahead of the pack.

Lim Chon Phung, general manager, Enterprise Business Computer Organisation Southeast Asia at HP Singapore Sales, noted his company's serious view on the acquisition.

"Compaq's purchase is focused on the enterprise," he said. "We will need to continue to focus on providing more value to enterprise users.

HP is aiming to steal Digital's VMS and DEC-Unix customers. According to Lim, his company is offering discounts of up to 35 per cent to attract these users to HP's enterprise offerings. CW

Microsoft lifts lid on new Office

By Bob Trott and Ed Scannell

Microsoft hopes to release by year-end the next version of its Office desktop applications suite, now called Office 9, which will be designed to enhance server-side capabilities and boast closer ties to Windows NT.

Office 9 will let IT managers use the Active Directory promised in NT 5.0 — which has no certain release date — to automate upgrades. Distribution of components — and individual features of the components, which also will be accessible on demand from the server — is the key to the new version, a Microsoft official said.

"In the new version, you can download components on demand," said group product manager Kirstin Larson. "The goal is to make Office attack the bloatware issue," Larson added.

"The block feature in Access doesn't have to be given to a client," Larson said. "However, in the old days if you wanted to give it to them, you would have to go into setup to reinstall that feature. Now, the user can click on the block feature and if he didn't have it, it would be downloaded to him. Currently, you can block a feature from a desktop, but you need to reinstall it; [in the new version] you don't."

The company plans to release a limited beta of Office 9 in the second quarter, a source close to the company said. Microsoft's goal is to deliver the upgrade by year's end, said Andrew Dixon, Office product manager.

Office 9 also will include support for the Extensible Markup Language (XML).

Microsoft is looking beyond Office 9 — officials recently demonstrated Office technology that focused on Web collaboration.

"Microsoft will offer capabilities to let users create virtual work groups and discussions on Web sites," said one source familiar with Microsoft's long-term goals. "That is not going to happen in Office 9. That is much further out." CW

Symantec announces anti-Trojan Horse software

By Cheri Paquet

Symantec has announced its Trojan Horse software designed to identify and delete malicious programs sent with the purpose of stealing passwords or destroying data.

The Trojan Horse detection engine compares a possible virus to hundreds of previously identified Trojan Horses and deletes any positive matches.

Trojan Horses, 90 per cent of which are found online, are programs designed to carry out destructive activities. Although the programs appear harmless — even offering incentives such as free online time — once downloaded and executed the code can be very destructive, Symantec said in a company statement.

For example, a Trojan Horse program may steal a user ID and password and forward account information to another user. Other such malignant programs may display obscene messages or delete the user's hard drive.

Trojan Horses do not replicate themselves as do tradition computer viruses, but instead are transmitted by e-mail or disk or downloaded directly onto a PC. Symantec estimates that hundreds of Trojan Horses exist today.

The Trojan Horse detection engine was developed by the Symantec AntiVirus Research Center (SARC) and is currently available to users of Norton AntiVirus 4.0 desktop and server software. To receive the Trojan Horse detection engine, users can download the update from the SARC Web site at http://www.symantec.com/avcenter/, or they can click on the LiveUpdate button in the antivirus software. Updates are free to Norton AntiVirus users.

Users with scheduled LiveUpdate upgrades will receive the detection engine with the next automatic update, which occur at monthly intervals.

Symantec posts fully tested automatic updates to its antivirus software at the first of every month, said Genevieve Haldeman, spokeswoman for Symantec.

Trojan Horses do not occur as frequently as traditional viruses, because users only get caught by them once, said Haldeman. CW

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Local retailers upbeat about e-commerce

However, myriad teething problems still prevail

By Eileen Yu

The government is presently encouraging retailers to answer its call to turn Singapore into an e-shopping haven for Internet customers. But how are those venturing into e-business coping?

Computerworld spoke to some merchants who ventured into the e-commerce scene and found most shared the view that as cyber-shopping in Singapore is still new, it would be premature to dismiss its potential even if it did not bring in the profits immediately.

Watch retailer Hour Glass for one is upbeat about the prospects.

The company started offering its customers the option of shopping via the Internet on a trial basis from July to August last year, according to Steven Wong, the company's IT manager.

During the two-month period, Hour Glass handled over 40 transactions from the 1000-odd surfers who accessed its Website in PlazaOne, one of a few Singapore-based Internet shopping malls. Prices charged for watches bought over the Web were lower compared to the same models bought off the shelves, Wong said.

"As it was only a trial, our range of products were limited and cost below S$500," he said.

Although he declined to give specific details regarding the profitability of doing Web business, Wong said that the company almost managed to cover the cost of setting up its Website.

"I am sure if we had extended the two-month trial period, we would have been able to cover our costs or even make some profit," he said.

Hour Glass has closed its Internet facility for now but is already looking into opening its own Website by the end of this year, Wong said.

Another PlazaOne tenant, Reebok, is also looking into developing its own self-managed website, said Jerrica Lok, advertising and promotions executive, Reebok.

However, given the current economic conditions, Lok is less optimistic.

"The market is pretty bad right now and at the moment, we are still looking into whether it is profitable for us to set up our own Website for on-line shopping," she said. "We have not ruled out the possibility yet, everything is still on hold because we still have not finalised our budget."

Security first

Lok also pointed out that the security of Internet payments is still a big concern.

"If I was a consumer, I would be worried about revealing my credit card number over the Internet," she said. "And what if I forgot to log out of a site and someone else uses my account?"

Based on US figures, Lok's concerns are not unfounded.

US-based National Consumers League (NCL) found that Internet fraud cases had tripled from 1996 to 1997. Internet fraud reports increased to almost 700 in the first seven months of 1997 from 389 in the previous year, said NCL's subsidiary Internet Fraud Watch (IFW).

A National Computer Board (NCB) study last year revealed the top concern regarding Internet shopping is the absence of a secure payment option.

Metro: Still a lot of pranksters on the 'Net.

Cold Storage: Web-business is profitable.

However, analysts say consumers and merchants alike will gradually gain confidence in a market that is still relatively new in Singapore.

"The development of encryption technology and other security technologies will continue at a pace which will nurture confidence in the market," said Pete Hitchen, IDC Asia-Pacific senior Internet analyst.

None of the merchants *Computerworld* spoke to in Singapore received any reports of Internet fraud from its customers.

MasterCard International spokesperson Nancy Alder also said she has not received reports of fraud resulting from credit card payment via the Internet.

POSBank's corporate communications assistant vice-president Kelly Wee, and DBS Bank assistant treasurer Genevieve Kuek also said reported no complaints from customers who used the banks' Internet banking facilities to pay bills.

Selling difficulties

But secuirty is not the only concern. Reebok also has to consider the viahility of selling shoes over the Internet.

"It is difficult for a consumer to buy shoes over the Internet unless the they know their sizes for our range of products," she said.

An NCB study said the top four best-selling products in Singapore over the Internet – books, tickets, computers, and music and video — are popular because purchase decisions could be made without needing to touch the products.

Internet pranksters have also created a minor problem for Metro which has its own Website with on-line shopping facilities.

"We received a lot of prank orders as many people are curious and order our merchandise for fun," said Bock Chak Peng, marketing and sales executive, Metro. "When we call to confirm their orders, they would say that they are not interested."

Generally, despite the region's current economic uncertainty dimming the e-commerce light a little, merchants are still optimistic Internet selling is the way to go.

Cold Storage offers its products in its cybermall, Virtual Mall, which to date, has seen over 14,000 Internet users since it was launched in August last year.

"Twenty per cent of our orders are from the Internet," said Cold Storage dial and delivery manager May Chew. "It is a profitable business to be in."

Others feel offering their services via the Internet is keeping in pace with advancing technology and growing consumer needs.

"The objective of setting up our Website is a futuristic move and we would like to move in line with that," said Metro's Bock.

Cold Storage's Chew said Virtual Mall was set up to reach out to more consumers and to improve its customer service.

Bock best sums up the sentiments, "E-commerce is definitely here to stay, shoppers just need more time to adapt and get used to the idea of shopping on the 'Net." CW

W3C endorses XML standard

By Dana Gardner

The World Wide Web Consortium (W3C) has given the Extensible Markup Language (XML) 1.0 specification its final approval, providing software developers and content creators a powerful new means for organising information on the Web.

By granting XML its "recommendation" status, W3C has assured potential users that XML is both stable and meets the need for interoperability via the Web. It also means that the group of vendors that organised to create and support it did so with wide enough interests in mind.

The XML organising group includes such wide-ranging players as Adobe, ArborText, DataChannel, Hewlett-Packard, Inso, Isogen, Microsoft, National Center for Supercomputing Association, Netscape, SoftQuad, Sun Microsystems, and Fuji Xerox.

Among several potential uses, XML is expected to initially allow for the defining, validating, and sharing of document formats over the Web. For example, it allows for related partners — such as an industry niche of vendors, suppliers and customers — to create an agreed upon set of online tags that can identify Web objects so they can be better managed and used.

Already a group of online publishers has banded together to create an Internet Content Exchange (ICE) to spur the ability for online news stories to be better coordinated among its constituents. CW

INTERNET shorts

Digital offers free e-mail

Digital Equipment announced that users of its AltaVista Web search engine can now use a free e-mail service via a tie-up between Digital and iName, a division of New York-based e-mail technology provider GlobeComm. GlobeComm's iName division specialises in offering free e-mail accounts, lifetime e-mail forwarding and Web browser-based e-mail access.

Policing the network

Network Associates will deliver at the end of this month its CyberCop intrusion-detection solution, which will be available first as a stand-alone product and later as part of the Total Network Security Suite when it is released. Based on technology from Network General and licensed technology from WheelGroup, CyberCop traces the ways in which hackers go through or around firewalls. According to Katherine Stolz, CyberCop product manager, the solution is "a high-tech alarm system that can detect unauthorised activity within 20 minutes." CyberCop will ship February 27 on Solaris, and is expected to support NT in subsequent releases.

Java-enhanced performance

KL Group has announced JProbe Profiler, a graphical hierarchical profiler that enables Java developers to conduct fast, in-depth code analysis on Java applets and applications. The tool can accurately measure virtually anything to do with Java program execution from within the JVM itself. JProbe makes it easy to analyse an application's performance and identify bottlenecks. Once corrected, JProbe can be used to verify the correction. JProbe requires a Pentium-based machine running Windows NT. JProbe will be available in March for a price of US$499 (S$823). A preview edition is now available on KL's Web site at http://www.klg.com/.

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AGENCY.COM GIVES E-COMMERCE THE THUMBS UP

FACE to FACE

Agency.Com specialises in developing Web sites dedicated to online marketing. It is hardly surprising therefore that Chan W Suh, chairman, CEO and co-founder of Agency.Conn, gives e-commerce an upbeat forecast. He believes it will be the next wave in Internet use, as Computerworld*'s SOLOMON S EMANUEL found ont when he met up with Chan recently.*

COMPUTERWORLD: What do you see the future to be like for electronic-commerce (e-commeree)?

In general, I think that e-commerce is the way things are going to be. I don't think that it will eclipse all other forms of commerce by any means, but I think it's going to be a very significant part of everybody's everyday life. So it's going to be an accepted fact of life by the time I guess if I had kids now, they grow up. But e-commerce is certainly here to stay.

Asia has a special opportunity. The fact is that the telecommunications infrastructure in Asia is about to be really installed, and everybody is doing it having learnt from the mistakes and the advances of other parts of the world. Let other people make the mistakes. It's a terrific way to learn. So that means that the logistics of e-commerce will be much easier to handle in Asia than in other places. And I think in fact it's going to achieve parity in lesser time than other parts of the world.

CW: Do you see e-commerce getting a boost from businesses or do you think it will be consumer driven?

Well I think that there is a disparity at the moment. The perception of e-commerce is much higher than the reality of it. All businesses know that e-commerce is the way that things are going to happen, but very few businesses are actually making concrete plans or making investments in that area.

Consumers expect one thing out of e-commerce, businesses expect something else. So I think it will be driven as most things are, by consumer demand, but I think that it would be started by businesses giving it a push.

When we started our business in '94, the Internet was still largely funded by the National Science Foundation of the United States. We knew that that was going to come to an end. We knew that the businesses were going to pay the bill. But they're not going to do that indefinitely. Consumers actually have to use it to business' profit or at least parity, in order for this thing to be a viable mechanism. All indications are that that's going to happen. It is already happening for many businesses that are naturals for this — financial services, travel, and certainly for the computer world this is booming.

CW: So what is the perception of e-commerce and what's reality?

The perception is that it is easy if only a few things are taken care of. You know, it is often the temptation of technological people to assume that if the technology is there then everything else is there. "So as soon as we get that server up there man, we're going to start doing e-commerce." That's the perception.

The reality is that e-commerce infrastructure doesn't guarantee e-commerce success. So we always advice our clients that if you are going to use e-commerce as a channel of distribution, you've got to put into it as much resources as if you were opening a new store or a new distribution office somewhere. Otherwise it's not going to flourish. So that's often where companies get held up in terms of investment. They understand that they can buy the servers and machines and they can touch it, so it's got to be good right? But the investment necessary to make the servers actually make money for you is a little bit different.

> You know sometimes this feels like rocket science but it's not even though there are rocket scientists working in this field.

You've got to drive the business to the infrastructure. Let's say you open a store down Orchard Road. You don't tell anybody about it and you just rely on traffic. You might just get some business, but you'll get a lot more business if you actually promote it, stock it with the right kind of things that you know people are going to buy or coming to the store will want. And then drive that business upward. Pull people to it. It's like a cycle. It's just regular business.

You know sometimes this feels like rocket science but it's not even though there are rocket scientists working in this field. The same rules of business apply everywhere because fundamentally you are dealing with people. You are doing commerce. E-commerce is commerce. So the same rules of business that we've learnt over thousands of years still apply — good customer service gets you a better prospective customer next time. Don't over-promise. Those are same rules everywhere, whether you are running a supermarket or a computer company.

What's holding businesses from providing e-commerce?

I guess a couple of things. Fear of the unknown. You know those evil hackers out there, the security concerns and so on and so forth. That's being addressed I think. Security. Plain fact of it is that it is more secure than other means. You know I hand my credit card to a totally unknown person when I go to lunch, I don't know what is going to happen to it. So the fact is that it is more secure. Probably perception just has to catch up with reality.

The other thing that holds companies back is the investment necessary to do this. The fact is if you are going to do it right, you've got to spend the money to do it right and you know it's new. People who run businesses so far have done very well. And we shouldn't forget that without the Internet, people have built million dollar businesses.

The fact is that e-commerce is going to happen whether businesses like it or not and what they should be thinking about in '98 is not whether they are going to participate in it but how are they going to participate. And it's not something that can wait. Every moment is precious.

People are forming brand new loyalties in the online world. It's like a whole new game. Some of the old loyalties, unless they are fostered in the online world are going to lose. Take Amazon.com, the biggest bookseller out there against Barnes and Noble which is a traditional sort of retailer. They sort of invented this concept of mega-bookstores. Amazon is kicking their you know what online, and Amazon is valued more highly by investors than Barnes and Noble. But Amazon has never made any money. But that's okay because investors are safe. You are capturing the minds and hearts of this new generation of e-commerce users — young, old, whatever. That means that you're the future.

I would say the general hesitation is bad because if you don't look at it then you don't know if you can use it or can't use it. So you need to actually, as a business, do a real feasibility study.

CW: So you're saying that e-commerce is the next wave in Internet use?

Yes. E-commerce, as far as I am concerned, was always the goal. In '94 when I started the business, it's always heen the goal. Ninety-eight is going to separate the true mega-global rans from the also-rans. And I deal with large businesses mostly. So those are the concerns.

For small businesses it's a terrific opportunity. It's an incredible opportunity to go and win market share, brand positioning, free distribution. There is unbelievable opportunity for small to medium sized businesses. Incredible stuff. And more savvy business-to-business providers understand that and they are concentrating on that field.

We're a small business and we've grown very fast just because we understand how to use the medium.

CW: Is it fair to say that most businesses are taking on e-commerce because the competition is doing so?

Oh absolutely. There will be lots of money lost on the Internet, lots of investments that go nowhere. We always advice our clients to determine what they're expecting as a return on their investments. Doesn't necessarily mean dollars. It could be awareness of brand, leads rather than actual dollars transacted, things like that, before they start this effort. Then they can figure out if they spent the money wisely or not.

The crucial difference is that in a physical world if you look at yourself next to your competitor, chances are people will look at you too when they go see your competitor. In the online world, that will not happen. So the fact that you're going up there because your competitor's up there doesn't do you any good unless you are doing it for a fact — so your sales people can say, "We're on the Internet too." That might have some small impact.

I don't think that every single business should be on the Internet. I think that a business that is not ready to fulfill the business generated by e-commerce should not go on there. That would be a bad move because you will do more damage to your reputation than any money you generate from e-commerce.

E-commerce is not for everyone. How am I going to buy soap or perfume. But perfume companies might want to do a publicity site associated with it. Or aid sales. So if you buy this thing, you can go online and do this cool thing as a reward. CW

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NETWORK DIGESTS

Adaptec's new Ultra 2 SCSI card

Adaptec has launched a new small computer system interface (SCSI) card which can transfer data at up to 80M per second, twice the maximum burst rate of its predecessor, UltraWide SCSI. A SCSI Card fits inside a computer and is used as a connection to transfer data between the PC to the hard drive and other periphals like printers and scanners. The Ultra 2 SCSI Card 2940U2W kit provides four extended cable lengths of up to 12 metres for Ultra 2 devices, along with four connectors which can be used simultaneously SCSI Card 2940U2W can connect up to 15 SCSI peripherals and has been tested for compatibility with over 350 systems and peripherals. Another highlight of the new tool is the Speedflex technology which allows new Ultra 2 and previous Ultra devices to operate simultaneously at full burst rate of each bus.

Cabletron finalises Digital network buyout

Cabletron Systems last week completed its acquisition of Digital's Network Products Group. The US$430 million (S$709 million) acquisition was first announced on November 25 last year. Cabletron will distribute Digital's network products as well as its own products and Digital will continue to provide technical support and warranty service for the Digital-branded products via its new division, Digital Network Business Segment. It is also committed to purchasing a certain amount of Cabletron products during the term of a reseller agreement, according to Cabletron.

Tivoli links up with Compaq

Tivoli Systems has shipped a module that integrates Compaq Computer's Insight Manager tool so users can watch Compaq servers using Tivoli's TME 10 enterprise manager. Now central operators can watch Compaq servers and other systems, networks and applications through the TME 10 console. The goal is to lower the cost and complexity of managing client/server environments by giving information systems a single view of events and a central point to control software distribution and other tasks. Each Insight Manager server costs US$1,000 (S$1,650).

Novell builds message gates

Novell is shipping a free gateway for linking its' GroupWise messaging and groupware system to Lotus Notes. The company is beta-testing a GroupWise gateway for Microsoft Exchange. Both gateways can be downloaded from Novell's World Wide Web site at www.novell.com/download.

AMP ups copper speed to 300MHz

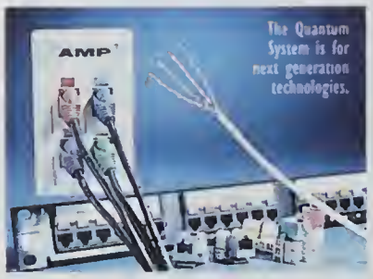
By Tao Ai Lei

AMP, supplier of structured cabling systems, has announced Netconnect Quantum system which achieves 300MHz bandwidth performance levels. According to AMP, this meets the proposed standard for Category 6 cabling.

The Quantum system includes Quantum 4-pair unshielded twisted pair (UTP) cable, patch cords, and connecting hardware, patch panels and connectors.

This system is targetted at companies with need for heavy bandwidth use, such as CAD/CAM, software development, aerospace, and pre-press/publishing.

Aimed at copper cabling to the desktop, versus for the network backbone, the Quantum system will have a 20 to 25 per cent



cost premium over enhanced Category 5 cabling for the total installed system, said Stephen Smith, director of premises cabling, LAN systems and services at AMP Asia-Pacific. In comparison, enhanced Category 5 cabling has a 5 per cent added cost over Category 5 cables.

With this higher performance cables, users of the Quantum system are also likely to have greater headroom for technologies such as Gigabit Ethernet, and 1.2Mbps ATM (Asynchronous Transfer Mode) networking environments.

"There has been considerable hype lately regarding high performance UTP cabling in support of gigabit-speed technologies. We expect early adopters of our system to be customers migrating to or actively implementing next-generation networking technologies," said Smith.

The Quantum system will be available through AMP's Netconnect design and installation contractors, Netconnect system integrators and distributors in the first quarter of 1998. CW

Xircom predicts next computing wave

By Gerald Wee

The next major revolution in computing and communications is mobility, said Dirk Gates, chairman and chief executive officer of Xircom.

According to Gates, the basic driving force towards this paradigm is a desire to be able to work anywhere and anytime.

"The growth of notebooks and PC cards, mobile phones, pagers, and personal digital assistance are all indicators of this," he said. "These

Gates: Mobility increases productivity and quality of life.

devices let you work where you choose, and keeps you in touch with your information and other people, increasing productivity and quality of life."

Gates cites International Data Corporation figures which predicts the worldwide portable PC shipments to grow from 15 million units last year to 24.2 million by the year 2000. IDC also predicts a correspondingly large growth for PC card shipments – from 16 million units last year to 30.9 million units in 2000.

As a specialist in PC cards and mobile networking, Xircom expects to be a key participant in this wave together with notebook and mobile phone vendors like Toshiba and Nokia.

Xircom is already planning to roll out faster multifunction CardBus PC cards, integrating gigabit Ethernet, xDSL, and GSM technologies over the next year or so.

"Over the past 12 months, we have introduced 19 new products," said Gates. "We plan to continue rolling out products at that rate." CW

Cisco finally unveils Gigabit Ethernet products

By Stephen Lawson

Cisco Systems has announced its first products supporting Gigabit Ethernet, at long last forging into a market in which most of its primary competitors already compete.

Officials confirmed that the company will announce a new Catalyst switching chassis, and interface modules for both the flagship Catalyst 5x00 switch and the 7x00 router lines that include Gigabit Ethernet interfaces. In addition, Cisco will announce a NetFlow feature card that will fit into the supervisor module of the Catalyst 5x00 switches and provide high-speed Layer 3 switching capability.

Some observers said the long-awaited introduction by Cisco, the top supplier of backbone routers and a dominant switching vendor, will help to bring the nascent high-speed technology into large enterprises that have standardised on Cisco hardware.

"What Cisco does is legitimise the technology further to a larger customer base," said John Armstrong, an analyst at Dataquest. CW

3Com rolls out aggressively priced switches

By Tao Ai Lei

3Com has announced a broad line of aggressively priced switches.

The SuperStack 1100 has 24 switched Ethernet ports and two 100 megabits per second (Mbps) uplinks. Priced at US$77 (S$127) per port, it has started shipping.

The SuperStack 3300 has 24 ports, each of which can operate at 10 or 100 Mbps. It will cost US$175 (S$289) per port. The SuperStack 3900 is available in 24- and 36-port configurations at US$243 (S$400) per port and can be equipped with a US$1,995 (S$3,292) Gigabit Ethernet uplink. It can handle 19 million packets per second.

3Com will also announce the SuperStack 9300, a Gigabit Ethernet family comprising two models: a 10-port system at US$1,375 (S$2,268) per Gigabit Ethernet port, and a 12-port system at US$1,249 (S$2,060) per port. The 3300, 3900 and 9300 models will ship in March.

Dhingra: Mass deployment of Gigabit Ethernet.

3Com also announced a Fast EtherLink XL 10/100 network interface card (NIC) that is based on its new Parallel Tasking II technology, and remote PC software. According to 3Com, it can be used in a managed PC environment, with features like remote power-on, and execute chores from one location. Available at US$94 (S$155) per NIC, it is now available.

"We want to make Gigabit Ethernet ready for mass deployment at affordable prices. This is the industry's broadest 10/100/1000 solution for the desktop, workgroup and core," said Raj Dhingra, director of marketing, Premises Distribution Division at 3Com. CW

Pushing MOM into the enterprise

BOB SPALDING reports that as middleware proliferates across the enterprise, message-oriented products and architectures are becoming critical in building multi-tiered client-server applications.

Users who are scaling up their online operations, find that they need additional software to manage and process the trading of data between the client and back-end. Middleware is that category of software that helps to distribute application processes across multiple machines, and to enable communication between them.

As middleware proliferates across the enterprise, asynchronous, message-oriented products and architectures are becoming critical components in building multi-tiered client-server applications.

The movement is driving network administrators to put an increased emphasis on network management for message-oriented middleware (MOM) infrastructures.

MOM is a specific class of middleware that operates on the principles of message passing and/or message queuing. In general, MOM is characterised by a peer-to-peer distributed computing model supporting synchronous and asynchronous communication between distributed computers.

MOM generally provides high-level services, multi-protocol support and other systems management services. It creates an infrastructure to support reliable, scalable and performance-oriented distributed applications in heterogeneous network environments.

To understand MOM's role in enterprise computing, we first must review the simple database client-server model of the late 1980s and early 1990s. The models were inherently challenged with bandwidth, routing and synchronisation problems as multiple-client programs attempted to utilise limited server resources.

The evolution of the application server provided additional challenges, such as scalability problems, serial routing to database servers and a single point of failure. The situation required a more flexible offering if enterprises were going to move to multi-tiered client/server applications.

The answer was to communicate between applications via messages and to provide each processing node with a queue to track, prioritise and process application-to-application requests.

The architecture also delivered the flexibility of peer relationships, enabling the development of routing dynamics and optimisation, and increasing the application's reliability and availability. Asynchronous MOM offers these advancements to the client/server programming arsenal.

As middleware influenced the network, so does the network influence the development of middleware infrastructure and the operation and management of its applications.

Initial network configurations must be designed and tested against production application and database dependencies.

Capacity requirements provide additional challenges as bandwidth restrictions, use of heterogeneous protocols and other network traffic, such as database middleware or SNMP, are taken into account.

MOM check

As production systems are rolled out, monitoring connections, queues and network resources become critical in identifying performance problems. An open window must exist into the MOM environment. Network administrators will be frustrated using tools that have no relationship between network resources and middle-ware connections.

Managing dynamic network utilisation before new systems settle into production usage and application logic becomes optimised requires a specific MOM monitor.

MOM management tools should have the ability to monitor transmission capacity, routes and loading factors.

They also should be able to quickly identify bottlenecks and resource delays.

Ideally, the administrator will have a system-wide console to initiate and terminate middleware connections, queues and resources because systems and network management will overlap usage in this area.

Gathering information about middleware environments provides valuable insights into the performance and potential enhancement of the infrastructure. Collection and summarisation of heterogeneous activity logs provides a foundation with which to analyse network performance

What is middleware?

Middleware is a general term that has come to represent a variety of distributed computing services and application development environments. As the name implies, middleware products operate between the application logic and the underlying physical network. It encompasses a wide range of services and products, including message-queuing, application development environments (ADEs), object development environments, database access, distributed transaction processing, messaging communications, and RPC-based communications. Many of these products and services provide overlapping functionality, and no one vendor provides everything necessary to develop and deploy an enterprise-wide distributed application. The challenge for the user is determining which combination is appropriate to the her application needs at hand.

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in relation to middleware application performance.

MOM has become embedded in many servers, transaction processing monitors and other communications packages.

Not surprisingly, due to its network-dependent architecture, Internet environments will he the first to experience the benefits and challenges as embedded MOM technologies enable transactional services within existing legacy systems.

Asynchronous middleware products are being implemented today.

Although used in many cases to integrate existing legacy and open environments, MOM is evolving to meet the challenge of true distributed applications. However, this is providing an increasingly complex set of network challenges.

Understanding the basics of middle-ware infrastructures and armed with basic management tools, network administrators and designers can play a key role in the success of their middle-ware software projects.

Middleware has changed the basic architecture and processing paradigms for the enterprise network.

MOM technologies will continue to drive a closer integration of network services and applications management.

Robust middleware for 'Net infrastructure

In the Internet world, middleware plays a role linking disparate systems, and allowing interoperability between heterogeneous platforms and systems.

The Internet has allowed the concept of a single client gaining access to data sources worldwide.

"It has made a great impact in the IT infrastructure. The World Wide Web provides a borderless environment where all a user needs is a browser. It is now a smart client concept", said Cavin Choo, Wall Data's general manager for Asia.

"The Internet has reduced the complexity in platforms and programming environments. You just need a simple client or web browser to reach information on different platforms, whether Unix, Windows, or even mainframes," said Chan Chiou Hao, solution engineer at Intranesis Communications, distributor of Allaire middleware products.

According to the Standish Group, robust middleware is the key to successful Internet applications. It is the idea that the ideal mission-critical environment would have separate business functions. Moving from the popular three-tier IT model, of separating business logic, presentation logic, and data into three different tiers of processing. With the Internet, technology such as an Object Request Broker (ORB), would offer a separation of transactional control via a transaction processing monitor, and a separation of the message structure utilising an enterprise messaging technology product.

Today, products are still evolving to the stage where they can operate in a seamless fashion. Eventually, the vision is to be able to mix and match the different product technologies within a single computing environment. Users can then choose products and tools from different vendors and sources, and use them interoperably.

Right now, middleware vendors are faced with the challenge of providing tools that can work seamlessly together.

"Vendors are trying to pull together legacy systems with Microsoft NT, Java, browsers and the Internet. We are trying to help customers deal with the explosive of information, and the management, deployment of middleware for systems," said Chris Crane, general manager of Southeast Asia, WRQ Software.

Another perception is that some of the middleware available today are still proprietary.

"There is a slow proliferation of more and more classes of middleware appearing. A lot of companies are scrambling to provide proprietary means to access their software. In addition, much of the browser to host middleware tend to be inflexible, and allow limited changes to the application from the browser. The overheads may also be high, as the data stream will take some time to convert to Hypertext Markup Language (HTML) data," said Choo.

However, bringing mission-critical applications and information to the desktop via the Internet still faces barriers that are not just technological. Companies would need the assurance that there is a similar amount of security before they start using the Internet and its applications as a critical business application.

"Say what you like, people are still concerned about conducting their businesses on the Internet. It is specific to the Asian marketplace, where people are used to running businesses through wide area networks (WAN), local area networks (LAN), but not the Internet," said Choo.

Choo elaborated further, citing the example of Internet banking, where the online facilities are seen as an additional service, and not as the key means of banking.

— *by* **Tao Ai Lei**

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Reviews

Digital hits an ultra hinote

By **Steven Lee**

SUMMARY

GOOD
HiNote Ultra 2000

Oigital Equipment Singapore
73 Bukit Timah Road #03-00
Tong Nam Building
Singapore 229832.

PRICE: S$5,999 (w/o GST)

PROS: Reasonable weight. Impressive 14.1 inch screen. Thickness of 1 inch accommodates a multi-purpose bay. Ample palm rest. Built-in modem.

CONS: The base memory is only 16M. Sound is not impressive. When using the floppy drive, switching to CD-ROM drive, and back to floppy, the machine hangs.

Laptops and notebooks used to have only one objective — to allow the user to move his computing machine to wherever he wants, at any time. Not so nowadays. Different classes have come on. There are the chunky luggables which seem to have everything short of the kitchen sink. Then at the other end of the scale, the mini-notebooks with the Win95 operating system in them. The challenge to the manufacturer is to have the best of both worlds — power in a featherweight.

The 560 series from IBM came close to the road warrior's dream but for the lack of a floppy or CD-ROM drive integrated into the chassis. The latest introduction from Digital, however, seems to have overcome this.

Digital's HiNote Ultra 2000, though plain in appearance, surprised me once it was in my hands. Weight? Not bad! But the screen is one of the most impressive that I have seen so far. Measuring 14.1 inches, this is one of the biggest that can be found on any commercial laptop model now.

Thickness of the laptop is acceptable, just past 1 inch. But when you realise that a multi-purpose bay which accommodates a floppy drive together with a CD-ROM drive simultaneously is included within the 1 inch, you appreciate the size even more.

To accommodate the 14 inch screen, the dimensions of the laptop naturally had to be increased. This has its plus and minus points. One good thing is that the palmrest is ample, in fact more than ample.

Close to half the area of the laptop is allocated to the palmrest, making for a comfortable typing experience. The minus point would be, of course, the added bulk that the user has to carry. But you can't have your cake and eat it.

Power for this laptop is provided for by an Intel Pentium 166MMX CPU, and together with the 32M of RAM, this is sufficient for any road warrior. One grouse here is that the base memory provided is actually only 16M, and that one of the two expansion slots is taken up for the additional 16M, leaving only one more slot for the user to expand. This means that if the user wants to expand beyond 92M (16 + 16 + 64) then he would have to discard the included 16M RAM.

It would definitely be more considerate to have the base memory as 32M RAM and that two expansion slots be available, instead of only one. To try out the multimedia capabilities, a Video CD (VCD) was played. During this test, I encountered many problems including my inability to play a VCD movie properly using the Microsoft MediaPlayer. This was solved only when a commercial VCD player software was installed.

Even then, every few minutes the CD-ROM drive would only work intermittently, leading to much frustration. The problem extends to the using of the CD-ROM to run programs. But then again, when the movie was playing, playback on the entire 14-inch screen posed no problems — no dropped frames, and the audio-visual coordination was on time. I suspect that perhaps the review model was not checked through properly for operating system integrity, leading to the problems.

The sound provided by two tiny speakers, located at the side of the laptop, would not impress anyone at all.

Extras provided are the built-in USRobotics modem, which is said to be upgradable to 56K-bits per second. This would save on one of the PC Card slots, typically taken by a modem.

Another area of contention is that of the supposedly hot swappable multi-purpose bay. What I found out is that if you are using the floppy drive and then you switch to CD-ROM drive, and back to floppy, the machine would hang.

Together with the two optional expansion docking stations, this laptop poses a big threat to IBM's current reign of thin but power-packed laptops if and only if the technical problems that I encountered are taken care of. Still this is a really great machine for one who is trying to find an excuse for getting a laptop. CW

Maintaining power with a wave

By ***Steven Lee***

SUMMARY

BUY IT!
Pulsar ESV 5+

MGE Asia
5 Pereira Road #01-03
Asiawide Industrial Building
Singapore 3768025.
Tel: 288 4323 * 286 7627

PRICE: S$592

PROS: Refreshing design. Physical setup is simple and designed to save one power point for the user. Software installation for various operating systems are contained in a single CD. Easy-to-use interface.

CONS: Battery indicator is cryptic. Installation on a Win95 machine is short and simple but the instructions can be enhanced with more explanations. Complete installation requires a PC restart or else many problems can be encountered.

"UPS". To most non-IT people the acronym probably refers to a courier firm. But those who treasure and guard their computer data zealously realise that the acronym means uninterruptible power supply — a lifesaver — supplying power to the computer system when the main power supply is cut off. This allows important work and documents to be saved before the UPS shuts down the computer system properly.

Most UPS designs are pretty run-of-the-mill — small grey rectangular boxes that you would want to hide underneath your table. Thus I was pleasantly surprised when I saw the Pulsar ESV 5+ review unit from MGE. For one thing, it is black.

Secondly, it is not a rectangular box, but has a wavy contemporary shape that would fit in into any modern office, pridefully in full view of anyone passing by. It can be left standing on its side, or even as a stand for the monitor, and still not look out of place.

Physical setup of the Pulsar is straight-forward. Plug in the power cable from the power point to the unit, connect to the system unit and the monitor via the supplied power cable. There is also a communications cable that connects the unit to the PC for managing the UPS. In this case, it actually helps to save one power point for the end-user as now both the PC system unit and the monitor draw power via the UPS which takes up only one power point from the mains.

Software installation for various flavours of operating systems are all contained in a single CD. But the installation took certain liberties and makes certain assumptions. Like for certain operating systems, communication between the UPS and the computer system would have to be done through a network while for others, this communication can be done via a serial cable connected straight to the system communication port.

I tried the installation on a Win95 machine. While the process is short and simple, the instructions could be enhanced with more explanations since this UPS might also appeal to non-techies who may purchase it for SOHO (small office home office) PCs.

One thing to note about installation is that the complete process requires that the computer system be restarted. I tried the communication software without rebooting, and encountered many problems which were solved with a fresh installation and a clean reboot.

The user interface with the UPS emphasises ease-of-use. Many areas can be customised, like the amount of time before initiating the shutdown, automatic shutting down and starting of the UPS, and even the pager/electronic-mail system alert to the administrator about a power failure.

The model I reviewed comes with approximately 15 minutes of power supply for a PC and a monitor. This should be sufficient for most cases as the amount of time needed to shut down a system running on Windows is much less than that.

I found the icons and the indicator bar which indicates the UPS battery life rather cryptic though. Simple words or a numerical percentage for each of the indicator lights would be much easier to understand. CW

Minolta's new colour printer

Minolta has introduced the Colour PagePro PS to cater to the needs of users who do designs, advertising, desktop publishing or in-house publishing. It prints on both plain paper and normal transparencies.

The printer offers the advantages of both Adobe PostScript level 2 and PCL 5c, which provide enhanced colour imaging. In addition, it comes embedded with Adobe PostScript level 2 as well as a 36M RAM upgradable to 68M to ensure smooth printing for PowerMac or PC users.

RoundUp

The Minolta PostScript default halftoning method arranges the printed dots to allow for a unique 100-line screen pattern, the vendor said. This method automatically adjusts colour grid contrast to different areas of an image to provide better gradations within patterns and flesh tones.

The speed of the printer is enhanced with a combination of Minolta's print engine, which , with the assistance of a 33MHz Intel I906 RISC processor and a QuickPrint co-processor, prints up to12 pages per minute (PPM) in monochrome and 3 PPM in full colour.

For more details, call Minolta at 563 5533 or fax 561 9879.

The recommended price is S$7,500. CW

Office 98 – Mac edition

Microsoft has unveiled Office 98 Macintosh Edition.

Working closely with Apple, the vendor said that it has ensured that the new software provides deep integration with the Mac OS. By incorporating new Mac OS 8 visuals and by supporting Macintosh drag-and-drop functionality and QuickTime VR as well as providing font menu previews, the software will allow customers to work in a familiar environment.

Other innovations include self-repairing applications that replace accidentally deleted system files, keeping customers productive and preventing help-desk calls to troubleshoot their software.

It also builds collaboration tools into the applications, allowing users to simultaneously edit the same spreadsheet, even across platforms, as well as manage revisions made by various users.

Additional features include new versions of Word, Excel and PowerPoint. Also included is Outlook Express and Microsoft Internet Explorer 4.0 for Macintosh.

The product is expected to be available in Singapore next month.

For more details, call Microsoft at 337 6088 or fax 337 6788.

The estimated retail price is S$749 and the upgrade from previous Microsoft Ottice applications is $429. CW

2nd Annual xDSL '98 Conference

According to the Asymmetric Digital Subscriber Line (ADSL) Forum, more than 560 million twisted copper pairs are in use in access networks around the world today.

Equipped with ADSL modems, these lines can be used to transmit high speed video and data to nearly every home and business.

Therefore, analysts have projected that 1998 is the year for *x*DSL and that it will become the dominant access technology for the future.

The 2nd Annual *x*DSL '98 Conference organised by the Asia-Pacific Telecommunication Network, a division of IBC Asia, will be held in Singapore from February 23 to 25 at the Marina Mandarin Hotel.

This event will showcase trials, rollouts and commercial deployments from Indonesia, Taiwan, Australia, Europe and the United States. Leading operators, Internet service providers (ISPs) and access technology experts will share their experiences in deploying *x*DSL to provide high speed Internet, video on demand (VOD) and broadband multimedia services.

Topics for debate and discussions include *x*DSL technology standards; applications of the various DSLs; mapping asynchronous transfer mode (ATM) over ADSL; making ADSL scalable and manageable for mass market deployment, and understanding the local loop impairments.

There will also be a live demonstration featuring MAGIX — the first ADSL multimedia service in Asia during "Opening up to a Whole New World of Wonders" and a joint presentation by Singapore Telecom and Alcatel on "Translating Trials into Commercial Deployment — the Singtel Multimedia Case Study".

For more information, please call IBC Asia at 732 1970 or fax 733 5087.

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CALENDAR

1998

FEBRUARY

23 to 25	**2nd Annual xDSL'98 Conference.** Call IBC Asia at 732 1970 or fax 733 5087.
23 to 25	**Asia-Pacific Customer Retention Strategies in Telecoms '98 Conference.** Call IBC Asia at 732 1970 or fax 733 5087.
25 to 27	**Maximising Access Technologies in the Local Loop Conference.** Call IBC Asia at 732 1970 or fax 733 5087.
26	**Java for the Enterprise Seminar.** Call Compaq at 431 3737 or fax 431 3773.
26 to 2 Mar	**Jakarta Computer Expo.** Call InfoKomputer at (62-21) 549 4333 or fax (62-21) 549 4111.

MARCH

4 to 6	**CennectiWorld (Phiffppines).** Call WS Expositions at (632) 840 3521 or fax (632) 817 6430.
10	**Gigabit Ethernet: Networking into the Future Seminar.** Call Compaq at 431 3737 or fax 431 3773.
10 to 12	**Handset Asia (HongKong).** Call IBC Asia at 835 5137 or fax 736 4312.
16 to 18	**IONA World '98 (Boston, Massechu setts).** E-mail ionaworld@jrschuman.com or visit www.iona.com/Events/ioneworld.html for details.
17 to 20	**Digital Libraries Asia '98 Conference and Exhibition.** Call Hexa-Team Planners at 227 8110 or fax 227 8113.
19	**Secure Internet Messaging Applications Seminar.** Call Compaq at 431 3737 or fax 431 3773.
24 to 27	**Comdex China '98.** Call IDG World Expo (Asia) at 346 6811 or fax 346 6822.
27	**Customer Complaint Tracking System Workshop.** Call Asia Added Advantage at 479 4892 or fax 479 0468.
30 to 3 Apr	**CommUnity 98 Conference.** Call Softbank at 227 5755 or fax 227 8755.
30 to 3 Apr	**NetWorld+Interop98 Conference.** Call Softbank at 227 5755 or fax 227 8755.
31 to 2 Apr	**Cards Asia '98.** Call AIC Exhibitions at 222 8550 or fax 224 6328.

APRIL

1 to 3	**Networld+Interop98 Exhibition.** Call Softbank at 227 5755 or fax 227 8755.
1 to 3	**CommUnity 98 Exhibition.** Call Softbank at 227 5755 or fax 227 8755.
14 to 16	**Purchasing on the Internet Conference.** Call IQPC Worldwide at 325 6330 or fax 224 9514.
14 to 17	**ServicaTach Asia98.** Call Singapore Exhibition Services at 338 4747 or fax 339 5651.
14 to 18	**7th Annual World Wide Web Conference & Exhibition - "WWW7" (Brisbane).** Call Conference Secretariat Cenventions Queensland at (617) 387 08831 or fax (617) 337 19514.
22 to 25	**Vietnam Computerworld Expo 98 (Ho Chi Minh City).** Call IDG World Expo at 346 6811 or fax 346 6822.

MAY

5 to 8	**Plastics Technology Asia98.** Call Singapore Exhibition Services at 338 4747 or fax 339 5651.
14 to 17	**Office Asia '98 (Bangkok).** Call Hennovar Fairs Asia at 220 7633 or fax 220 9733.
20 to 22	**Financial Technology Expo Asia '98.** Call Miller Freaman at 294 3386 or fax 299 9782.
25 to 29	**CICS Commend Level Programming Course.** Call DBS Computer Services at 321 5850 or fax 323 4662.

JUNE

1 to 3	**CICS Application Debugging Course.** Call DBS Computer Services at 321 5850 or fax 323 4662.
2 to 5	**Network Asia98.** Call Singapore Exhibition Services at 338 4747 or fax 339 5651.
2 to 5	**CommunicAsia98.** Call Singapore Exhibition Services at 338 4747 or fax 339 9507.

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